Spring 2013

HIV/STD/Hepatitis/TB Newsletter

Division of Disease Control

NORTH DAKOTA DEPARTMENT of HEALTH

Tuberculosis (TB) in North Dakota

The past year has been a very active year for North Dakota regarding TB. In 2012 there were **26 cases of active TB** reported in North Dakota, which is significantly higher than past years when the average number of cases was eight. Twenty-one of the 26 cases are linked to the outbreak in Grand Forks County. Two cases from 2010, along with an additional two in 2013, are also linked to this outbreak, bringing the total number of cases to 25. Additionally, over 50 cases of latent TB infection have been identified.

The outbreak cases are a part of an interconnected social network where individuals are experiencing prolonged exposure to active TB cases. They also share many risk factors such as homelessness, incarceration, drug and alcohol abuse, and smoking.

The North Dakota Department of Health, along with Grand Forks Public Health and Altru Health System, continue to investigate this outbreak, and expect the number of cases to increase. For more information about TB, visit www.ndhealth.gov/disease/tb or contact Dee Pritschet, TB Controller, at 701.328.2377.

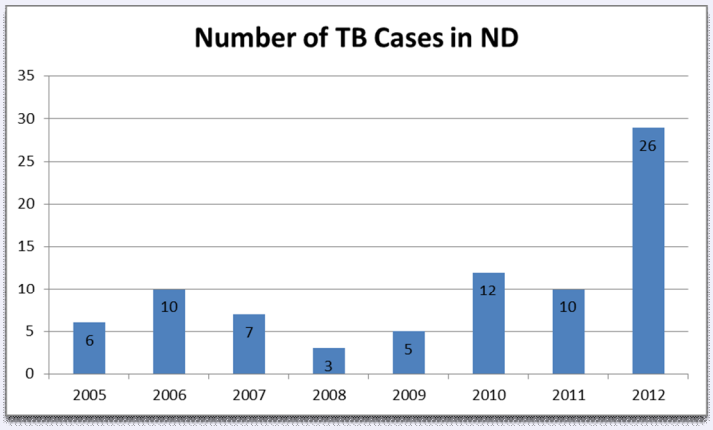

Figure 1. Number of TB Cases in North Dakota from 2005-2012

Upcoming Events

- HIV/STD/hepatitis testing event in Wahpeton, N.D.: May 31, 2013. For details call Christopher Wegner at 701.223.6700, ext. 2153, or 701.428.1HIV.
- **HIV/STD/Hepatitis/TB Symposium:** April 23 and 24, 2014. For more information, contact us at the Division of Disease Control at 701.328.2378.

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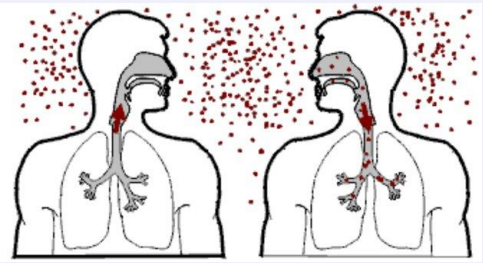
Tuberculosis (TB) Overview



Tuberculosis (TB) is a serious disease caused by the *Mycobacterium tuberculosis* bacterium. The bacteria usually infects the lungs, but can attack other parts of the body such as the spine, kidneys, bones and lymph nodes. TB is spread through the air when people with active pulmonary disease expel the bacteria that are nesting in their lungs by coughing, speaking, sneezing or singing. Most TB infections are **latent,** where germs are present but dormant or ñsleepingò and donôt harm the body, nor can be passed on.

When a personôs immune system becomes weakened, TB bacteria can become active and start multiplying leading to **TB disease,** which is contagious and possibly deadly if not treated properly.

TB is passed on by contact with a person who has active TB through coughing, sneezing and even talking.

About 10 percent of healthy people with LTBI (latent tuberculosis infection) will develop active disease at some point in their lifetime, but the risk is substantially higher for people with suppressed immune systems, such as individuals infected with HIV. In fact, among latent TB infected people, HIV infection is the strongest factor for development of active TB disease. The Centers for Disease Control and Prevention (CDC) guidelines classify anyone with TB and HIV as having AIDS and recommend that **all HIV patients get screened for TB**.

The initial test for TB is the Mantoux tuberculin skin test (TST) where a small amount of tuberculin purified protein derivative (PPD) is injected into the forearm. The skin test reaction is read between 48 and 72 hours after administration. If positive, the person needs a chest x-ray to rule out active disease. If the chest x-ray is positive for TB, a sputum sample is sent to the Division of Laboratory Services for a culture growth to see if TB germs are growing in the lungs. The picture on the right shows the common symptoms of TB.

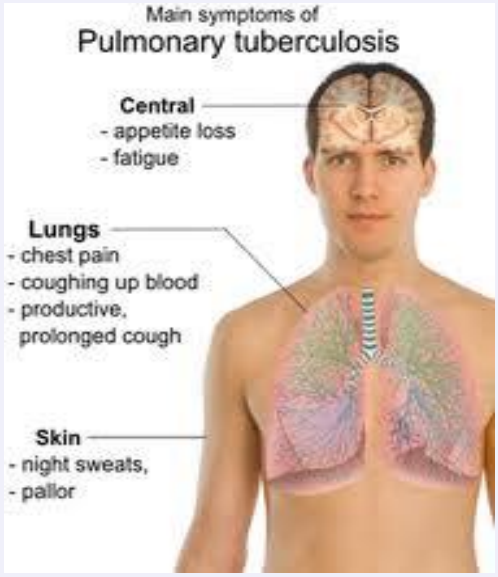


Image source kchdwv.org

TB Overview Cont.

If you are experiencing some of these symptoms, or know someone who is, please contact Dee Pritschet, North Dakota Department of Health TB Controller, at 701.328.2377 or djpritschet@nd.gov.

Treatment for latent TB infection includes isoniazid (INH), rifampin (RIF) and rifapentine (RPT). Treatment of active TB is six to nine months long and includes combination of several drugs. The first line of active TB treatment includes isoniazid (INH), rifampin (RIF), ethambutol (EMB) and pyrazinamide (PZA).

It is crucially important to follow and complete treatment to prevent drug resistance, future illness, and spreading of TB. For more information on TB medication and instructions on how to take them, visit www.cdc.gov/tb/publications/pamphlets/TB_trtmnt.pdf.

Isoniazid Shortage

North Dakota, along with the rest of the country, is experiencing a shortage of isoniazid (INH). Isoniazid is the first-line medication in prevention and treatment of active tuberculosis (TB) and latent tuberculosis (LTBI). The standard treatment regimen of INH ranges from six to nine months.

At this time, the North Dakota Department of Health continues to have a very limited supply of INH on hand. It is likely this shortage will continue for several more months. Due to the shortage of INH, treatment prioritization will be given to those individuals with confirmed or suspected active TB disease.

INH will also be provided for high-risk LTBI individuals such as:

- People with medical conditions which increase the likelihood of progression to tuberculosis disease (i.e., HIV/AIDS, diabetes, immunosuppression, TNf Alpha Inhibitor TX).
- Children younger than five years.
- Individuals with chest radiographic findings consistent with prior TB (i.e., fibrosis, scarring).
- Recent confirmed close/high-risk contact to a confirmed case of TB disease.
- People in correctional institutions who have sentences long enough to complete treatment.

- Documented conversions from negative TB skin test or blood test (IGRA) within the past two years.

Individuals who are already on treatment for TB infection and have been adherent to regular medication pick up monthly will also be provided INH.

An alternative treatment regimen for LTBI, when the infecting *M. tuberculosis* is believed to be INH resistant, or when the patient cannot tolerate INH, is rifampin.

CDC is working with the Food and Drug Administration (FDA), the National Tuberculosis Controllers Association, and the two pharmaceutical companies currently planning to supply INH (Teva Pharmaceuticals USA and Sandoz Inc.) to determine current INH stocks, jurisdictions with urgent needs, and options for restoring supplies as soon as can be safely done. CDC will monitor notifications from public health officials of INH shortages and stocks and will provide updates as they are available on the website for the Division of Tuberculosis Elimination at www.cdc.gov/tb.

For any questions regarding alternative treatment recommendations or other treatment questions, please contact Dee Pritschet, North Dakota Department of Health TB Controller, at 701.328.2377 or djpritschet@nd.gov.

Public Health Strategies For the Prevention and Control of the Infectious Diseases Among Illicit Drug Users

The Centers for Disease Control and Prevention and the U.S. Department of Health and Human Services have summarized recent (as of 2011) public health strategies for prevention and control of HIV, hepatitis, STDs and TB among people who use drugs illicitly and their sexual and drug-using partners. One of the most important guidance is to **provide integrated prevention services** to coordinate and enhance service delivery and public health outcomes for those who fall into this category, and eventually decrease the rate of infectious diseases among this population.

Image source cdc.gov

Public Health Strategies Cont.

According to CDC, rates of infectious diseases among people who use illicit drugs are substantially higher than among non-users. Intravenous drug users are at increased risk for acquiring and transmitting HIV and hepatitis C through blood. Approximately 9 to 12 percent of new HIV cases and 50 percent of new hepatitis C cases are associated with injection of illicit drugs. People who use drugs illicitly are also more likely to engage in high-risk behaviors such as unprotected sex and sex with infected partners. Illicit drug users also have high mortality, and moderate to high rates of co-infection.

In order to decrease these rates, the following public health strategies have been proven to help prevent and treat infectious diseases, substance use and mental health disorders:

- **Prevention and treatment of substance use and mental disorders**
- **Outreach programs**
- **Risk assessment for illicit use of drugs**
- **Risk assessment of HIV infection, viral hepatitis, STDs and TB**
- **Screening, diagnosis, and counseling**
- **Vaccination**
- **Prevention of mother-to-child transmission**
- **Interventions for reduction of risk behaviors**
- **Partner services and contact follow-up**
- **Referrals and linkage to care**
- **Medical treatment**
- **Delivery of integrated prevention services**
  Providing multiple services at a single venue, coordinating referrals, and providing linkage to services saves time, money, and results in better and more comprehensive care, treatment and prevention.

The full report can be found at:
www.cdc.gov/mmwr/preview/mmwrthml/rr6105a1.htm?s_cid=rr6105a1_w.

Prevention Benefits of HIV Treatment

Image source thinkprogress.org

The course of the HIV epidemic was drastically changed in 1996 with the beginning of the use of potent combination antiretroviral therapy (ART), also known as HAART (highly active antiretroviral therapy). HAART increased the life expectancy for people diagnosed with HIV/AIDS from months to decades, and improved the quality of life. With the positive effects on health and life expectancy of HIV positive individuals, scientists believed that ART also significantly reduced the risk of transmitting the infection to others.

Since the mid-1990s, it has been the belief that ART decreases the transmission rate from mother-to-child (perinatal transmission) by suppressing HIV viral load in the blood and genital fluids. The rate of transmission was reduced by 90 percent due to routine testing of pregnant women and treatment of infected mothers during pregnancy, delivery, and with abstinence from breastfeeding. One study showed that receiving ART for at least 14 days reduced the risk of transmission to less than one percent.

The definitive study that confirmed this belief was ñHIV Prevention Trials Network (HPTN) 052,ò published in 2011, in which a randomized clinical trial evaluated whether early antiretroviral therapy can prevent sexual transmission of HIV among heterosexual partners where one of the partners is HIV positive. The study results showed a **decrease in the risk of transmission by 96 percent** in those who received **early HIV treatment**.

This confirms that using HIV treatment as a way to improve health and reduce the risk of transmission is an effective strategy in HIV prevention. However, according to CDC, treatment alone will not solve the global HIV epidemic. **Getting an HIV test is the first step, followed by getting proper medical care and treatment if needed**. More than 1.1 million people in the United States are living with HIV, and approximately 1 in 5 is unaware of his/her infection (18.1%) and cause half of new infections. Even with the decreased rate of transmission as a result of early treatment, it is still important to remember that transmission can still happen, and it is important to emphasize other prevention methods. These include practicing safer sex by using condoms, reducing the number of partners, and avoiding sharing needles and syringes.

More information can be found at www.ndhealth.gov/hiv and www.cdc.gov/hiv.

Summarized CDC Guidelines for STDs, Hepatitis and HIV

Following are summarized Centers for Disease Control (CDC) recommendation for STDs, hepatitis and HIV. Providers may have further suggestions and specific recommendations.

Population	Recommendations
Sexually active **women** younger than **26** years of age	• Annual chlamydia screening
Sexually active **men** or **women**, who are not in a long-term monogamous relationship	• Hepatitis B vaccination • Annual HIV screening • Annual chlamydia screening
All men who have sex with men (**MSM**)	• Hepatitis A vaccination • Hepatitis B vaccination
Sexually active men who have sex with men (**MSM**) who are not in a long-term, mutually monogamous relationship	At least once per year screening for: • HIV • Syphilis • Chlamydia • Gonorrhea
Pregnant women	• HIV (as early as possible in pregnancy) • Chlamydia (at first prenatal visit) • Syphilis (at first prenatal visit) • Hepatitis B (at first prenatal visit) • Hepatitis C and gonorrhea as recommended by provider
Anybody seeking STD evaluation or treatment	• Screening for HIV • Hepatitis B vaccination • Screening for syphilis, gonorrhea, chlamydia as recommended by health provider
HIV-positive individuals	Screening for: • Hepatitis • TB • Syphilis

NORTH DAKOTA
DEPARTMENT of HEALTH

Disease Control

Lindsey VanderBusch is the new HIV/ STD/Hepatitis/TB Program manager. Lindsey is not new to Disease Control, she has been with this division for four years as the Influenza Surveillance and Syndromic Surveillance coordinator. She is looking forward to working with everyone and always has an open door. We are excited to have her on board in our program.

Disease Control has said farewell to Krissie Guerard, HIV/STD/Hepatitis/TB Program manager. Krissie has worked with the North Dakota Department of Health since 2006. Her old program wishes her best of luck in her new position!

HIV/AIDS/STD/Hepatitis/TB Program

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